

TABLE 53

Worldwide, domestic, and foreign total and R&D employment, by industry and company size: 2018

(Thousands and percent)

Industry and company size	NAICS code	Worldwide employees			Domestic employees			Foreign employees		
		Total	R&D	% R&D employees	Total	R&D	% R&D employees	Total	R&D	% R&D employees
All industries	21–23, 31–33, 42–81	31,345	2,564	8.2	20,645	1,766	8.6	10,700	797	7.5
Manufacturing industries	31–33	17,394	1,432	8.2	10,013	981	9.8	7,381	450	6.1
Food	311	1,541	37	2.4	1,016	24	2.4	525	13	2.5
Beverage and tobacco products	312	838	9	1.0	441	6	1.4	397	2	0.6
Textile, apparel, and leather products	313–16	466	10	2.1	257	8	3.1	209	2	0.9
Wood products	321	89	3	3.0	81	3	3.2	7	*	0.9
Paper	322	299	7	2.5	192	6	3.0	106	2	1.6
Printing and related support activities	323	133	3	2.6	114	3	3.0	19	*	0.4
Petroleum and coal products	324	179	8	4.7	108	7	6.2	71	2	2.4
Chemicals	325	2,401	268	11.2	1,383	189	13.6	1,018	79	7.8
Basic chemicals	3251	300	18	6.0	195	13	6.5	106	5	5.1
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	160	13	7.9	82	7	9.1	78	5	6.6
Pesticide, fertilizer, and other agricultural chemicals	3253	109	10	8.9	78	8	10.2	31	2	5.4
Pharmaceuticals and medicines	3254	1,080	191	17.7	624	138	22.1	456	53	11.7
Soap, cleaning compound, and toilet preparation	3256	469	18	3.7	246	12	4.7	223	6	2.7
Paint, coating, adhesive, and other chemicals	3255, 3259	284	19	6.7	158	11	7.0	126	8	6.3
Plastics and rubber products	326	586	29	5.0	423	25	5.9	164	4	2.6
Nonmetallic mineral products	327	243	8	3.1	153	6	4.2	90	1	1.4
Primary metals	331	360	11	3.0	236	9	3.7	124	2	1.6
Fabricated metal products	332	526	30	5.7	384	28	7.4	142	2	1.2
Machinery	333	1,788	142	7.9	902	93	10.3	886	49	5.5
Agricultural implement	33311	180	20	11.2	95	12	12.2	85	9	10.1
Semiconductor machinery	333242	85	18	21.2	32	11	34.4	54	7	13.4
Engine, turbine, and power transmission equipment	3336	255	22	8.6	108	13	11.9	147	9	6.1
Other machinery	other 333	1,267	82	6.5	666	58	8.6	600	24	4.1
Computer and electronic products	334	2,763	463	16.8	1,296	277	21.4	1,468	186	12.7
Communications equipment	3342	282	77	27.5	157	45	28.8	124	32	25.9
Semiconductor and other electronic components	3344	922	179	19.4	358	100	27.9	565	80	14.1
Navigational, measuring, electromedical, and control instruments	3345	890	108	12.1	500	73	14.5	390	35	9.1

TABLE 53

Worldwide, domestic, and foreign total and R&D employment, by industry and company size: 2018

(Thousands and percent)

Industry and company size	NAICS code	Worldwide employees			Domestic employees			Foreign employees		
		Total	R&D	% R&D employees	Total	R&D	% R&D employees	Total	R&D	% R&D employees
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	164	22 i	13.5	89	15 i	16.9	75	7 i	9.6
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	329	40	12.3	220	33	14.8	108	8	7.1
Other measuring and controlling device	other 3345	397	46	11.5	191	25	13.1	207	21	9.9
Other computer and electronic products	other 334	669	98	14.7	281	59	21.0	388	39	10.1
Electrical equipment, appliances, and components	335	732	45	6.2	289	24	8.4	443	21	4.7
Transportation equipment	336	2,940	258	8.8	1,881	197	10.5	1,059	61	5.7
Motor vehicles, bodies, trailers, and parts	3361-63	1,775	160	9.0	957	110	11.5	818	50	6.1
Aerospace products and parts	3364	919	84	9.1	745	75	10.1	174	8	4.8
Aircraft, aircraft engine, and aircraft parts	336411-13	868	76	8.8	708	68 i	9.6	160	8	5.2
Guided missile, space vehicle, and related parts	336414-15, 336419	51	8	15.1	37	8	20.8	14	*	0.2
Military armored vehicle, tank, and tank component	336992	1	*	5.1	1	*	5.1	0	0	NA
Other transportation	other 336	245	14	5.7	178	12	6.6	67	2	3.1
Furniture and related products	337	187	5	2.6	155	4	2.8	32	*	1.3
Miscellaneous	339	1,321	95	7.2	703	71	10.1	618	24	3.9
Medical equipment and supplies	3391	936	75	8.0	468	54	11.5	468	21	4.6
Other miscellaneous manufacturing	3399	385	20	5.2	234	17	7.3	151	3	1.8
Nonmanufacturing industries	21-23, 42-81	13,951	1,132	8.1	10,632	785	7.4	3,319	347	10.4
Mining, quarrying, oil and gas extraction, and support activities	21	376	15	3.9	204	12	6.0	172	2	1.4
Utilities	22	395	2	0.5	385	2	0.5	11	*	1.4
Wholesale trade	42	205 i	12 i	5.9	176 i	12 i	6.6	29	1	1.7
Electronic shopping and electronic auctions	454111-12	71 - 3,847	71 - 99	D	51 - 3,232	52	D	19 - 619	19 - 47	D
Transportation and warehousing	48-49	1,491	6	0.4	1,205	6	0.5	287	*	0.2
Information	51	2,851	493	17.3	2,030	342	16.8	820	151	18.4
Publishing	511	874	184	21.0	567	115	20.4	307	68	22.3
Newspaper, periodical, book, and directory publishers	5111	37 i	1 i	3.5	32 i	1 i	3.4	5 i	* i	3.7
Software publishers	5112	837	183	21.8	535	114	21.4	302	68	22.6
Telecommunications	517	710	23	3.2	633	22	3.4	77	1	1.5

TABLE 53

Worldwide, domestic, and foreign total and R&D employment, by industry and company size: 2018

(Thousands and percent)

Industry and company size	NAICS code	Worldwide employees			Domestic employees			Foreign employees		
		Total	R&D	% R&D employees	Total	R&D	% R&D employees	Total	R&D	% R&D employees
Data processing, hosting, and related services	518	735	164	22.3	436	105	24.0	298	60	20.0
Other information	other 51	532	122	23.0	394	100	25.4	138	22	16.0
Finance and insurance	52	1,717	61	3.5	1,394	47	3.3	323	14	4.4
Real estate and rental and leasing	53	28	4	14.1	22	4	16.8	6	*	3.7
Lessors of nonfinancial intangible assets (except copyrighted works)	533	1	*	2.2	1	*	2.2	0	0	NA
Other real estate and rental and leasing	other 53	27	4	14.3	21	4	17.2	6	*	3.7
Professional, scientific, and technical services	54	2,501	405	16.2	1,446	271	18.8	1,054	134	12.7
Architectural, engineering, and related services	5413	421	52	12.3	324	51	15.7	97	1	0.8
Computer systems design and related services	5415	1,025	139	13.6	487	92	18.8	538	48	8.8
Scientific research and development services	5417	404	177	43.8	300	97	32.4	104	80	76.3
Research and development in biotechnology	541711	165	56	34.0	133	31	23.2	32	25	78.9
Research and development in the physical, engineering, and life sciences (except biotechnology)	541712	233	116	49.5	161	61	38.0	72	54	75.2
Research and development in the social sciences and humanities	541720	6	5	87.5	6	5	88.1	*	*	56.2
Other professional, scientific, and technical services	other 54	651	38	5.8	336	32	9.4	315	6	2.0
Health care services	621-23	513	6	1.2	511	6	1.2	2	*	6.2
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	31 - 3,807	31 - 59	D	31 - 3,212	32	D	0 - 600	0 - 28	D
All companies (number of domestic employees)	-	31,345	2,564	8.2	20,645	1,766	8.6	10,700	797	7.5
Small companies										
10-19 ^a	-	72	27	37.1	64	25	38.9	8	2	22.9
20-49	-	283	75	26.7	236	68	29.1	47	7	14.8
Medium companies										
50-99	-	381	87	22.9	342	80	23.3	39	7	19.2
100-249	-	995	146	14.7	771	126	16.4	223	20	9.0
Large companies										
250-499	-	991	122	12.3	732	102	13.9	259	20	7.7
500-999	-	1,200	120	10.0	849	91	10.7	350	29	8.4
1,000-4,999	-	4,610	452	9.8	2,816	306	10.9	1,794	146	8.1

TABLE 53

Worldwide, domestic, and foreign total and R&D employment, by industry and company size: 2018

(Thousands and percent)

Industry and company size	NAICS code	Worldwide employees			Domestic employees			Foreign employees		
		Total	R&D	% R&D employees	Total	R&D	% R&D employees	Total	R&D	% R&D employees
5,000–9,999	–	3,266	308	9.4	1,713	178	10.4	1,553	130	8.4
10,000–24,999	–	5,993	478	8.0	3,454	304	8.8	2,539	173	6.8
25,000 or more	–	13,555	748	5.5	9,667	486	5.0	3,887	263	6.8

* = amount < 500 employees; D = data withheld to avoid disclosing operations of individual companies; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse; NA = not available.

NAICS = 2012 North American Industry Classification System.

^a Business Research and Development Survey does not include companies with fewer than 10 domestic employees.

Note(s):

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Beginning in survey year 2018, statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D. This change has affected the comparability of these estimates with estimates published for years prior to 2018. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

Source(s):

National Center for Science and Engineering Statistics and U.S. Census Bureau, Business Research and Development Survey, 2018.